

Amendments to the Claims:

1. (Withdrawn) An antimicrobial and chemical deactivating composition for use in a liquid medium or for incorporation into a coating, structural plastic material, thin microporous membrane, textile, or sponge, said composition comprising nanosize or submicron particles of silver, silver-copper alloy, chemical compounds of copper, iron, molybdenum and zinc Pyrithione.

2. (Withdrawn) An antimicrobial composition comprising nanosize or submicron size silver, silver-copper alloy, copper, iron, molybdenum and zinc Pyrithione as a powder, dispersion or an encapsulated composition with a suitable polymeric hydrogel selected from a group of acrylates, hydrophilic polyurethanes, polyvinyl alcohol, natural biopolymers, polyacetic acid, and acrylamides.

3. (Canceled)

4. (Withdrawn) A method for reducing the exposure to, or for deactivating chemical and biological warfare agents, and other toxic organic vapors at the surfaces of materials, comprising incorporating an antimicrobial and a chemical deactivating agent in porous fluropolymers with a sandwich layer or crosslinked polyvinyl alcohol or vinylalcohol copolymers with plasticizers and additives with the cross linking agents glyoxal, formaldehyde, and titanium triamino isopropoxide.

5. (Currently Amended) An antimicrobial and chemical agent deactivating material comprising:

- a laminating layer for providing a physical barrier to chemical vapors while permitting moisture to pass through said layer;
- catalytic material deposited on said laminating layer to provide chemical deactivation;
- an antimicrobial deposited on said catalytic materials.

6. (Currently Amended) The antimicrobial and chemical agent deactivating material of claim 5 wherein said laminating layer, said catalytic material and said antimicrobial are carbon free.

7. (Currently Amended) The antimicrobial and chemical deactivating material of claim 5 further comprising an assembly of positively charged polymers self assembling with negatively charged polymers to form a water ~~insoluble~~ insoluble electrostatic barrier.

8. (Currently Amended) The antimicrobial and chemical agent deactivating material of claim 5 wherein said laminating layer comprises polyvinylalcohol applied to an expanded microporous Poly tetrafluoro Ethylene a PTFE film wherein the polyvinyl alcohol is cross linked.

9. (Currently Amended) An antimicrobial and chemical agent deactivating material comprising:

a laminating layer for providing a physical barrier to chemical vapors while permitting moisture to pass through said layer;
catalytic material deposited on said laminating layer to provide chemical deactivation.

10. (Currently Amended) The antimicrobial and chemical agent deactivating material of claim 9 wherein said laminating layer, said catalytic material and said antimicrobial are carbon free.

11. (Currently Amended) The antimicrobial and chemical agent deactivating material of claim 9 further comprising an assembly of positively charged polymers self assembling with negatively charged polymers to form a water ~~insoluble~~ insoluble electrostatic barrier.

12. (Currently Amended) The antimicrobial and chemical agent deactivating material of claim 9 wherein said laminating layer comprises polyvinylalcohol applied to an expanded microporous Poly tetrafluoro Ethylene a-PTFE film wherein the plasticized polyvinylalcohol layer is cross-linked.

13. (Currently Amended) An antimicrobial and chemical agent deactivating material comprising:

a laminating layer for providing a physical barrier to chemical vapors while permitting moisture to pass through said layer;
an antimicrobial deposited on said catalytic materials.

14. (Currently Amended) The antimicrobial and chemical agent deactivating material of claim 13 wherein said laminating layer, said catalytic material and said antimicrobial are carbon free.

15. (Currently Amended) The antimicrobial and chemical agent deactivating material of claim 13 further comprising an assembly of positively charged polymers self assembling with negatively charged polymers to form a water insoluble electrostatic barrier_

16. (Currently Amended) The antimicrobial and chemical agent deactivating material of claim 13 wherein said laminating layer comprises polyvinylalcohol applied to an expanded microporous Polytetra fluoro ethylene a-PTFE film wherein the polyvinylalcohol layer is cross-linked.

17. (Withdrawn) An antimicrobial and chemical deactivating mixture comprising:
catalytic material for providing chemical deactivation;
an antimicrobial;
polyvinyl alcohol;
wherein said catalytic material, antimicrobial and polyvinyl alcohol are blended to form said mixture.

18. (Withdrawn) An antimicrobial and chemical deactivating material comprising:
a laminating layer of plasma treated polyvinyl alcohol for providing a
physical barrier to chemical vapors while permitting moisture to pass through said layer;
catalytic material deposited on said laminating layer to provide chemical
deactivation;
an antimicrobial deposited on said catalytic materials.

19. (Withdrawn) The antimicrobial and chemical deactivating material of claim 18
wherein said laminating layer, said catalytic material and said antimicrobial are carbon free.

20. (Withdrawn) An antimicrobial and chemical deactivating textile finish coating
comprising:
polyurethane;
an antimicrobial blended with said polyurethane.